

REMARKS

Upon entry of this Amendment, claims 1-11 and 13-31 will be pending in the present application. Claims 1, 22, 30 and 31 are independent claims. Claims 1, 22, 30 and 31 have been amended. Reconsideration of this Application, as amended, is respectfully requested.

Rejections Under 35 U.S.C. § 103

Claims 1, 2, 5-9, 11,13, 15, 16, 20-22, 24 and 28-31 stand rejected under 35 U.S.C. §103(a) over U.S. Patent No. 5,771,110 to Hirano et. al. (Hirano) in view of U.S. Patent No. 6,133,145 to Chen, and claims 10, 17-19 and 25-27 stand rejected under 35 U.S.C. 103(a) over Hirano and Chen as applied to claims 1, 22 and 30 in view of U.S. Patent No. 5,968,847 to Ye et al. (Ye). These rejections are respectfully traversed.

Discussion of Examiner's Response to Arguments

Applicant thanks the Examiner for the detailed response to the Applicant's arguments.

In paragraph 6 of the Office Action (Response to Arguments), the Examiner cites *In re Casey* and *In re Otto*. These cases belong to a line of cases which are limited to claims directed to machinery which works upon an article or material in its intended use. MPEP 2115, entitled Material or Article Worked Upon by Apparatus, provides that material or an article worked upon does not limit apparatus claims. A note at the end of this section provides that this line of cases (including the cases cited by the Examiner) is limited to claims

directed to machinery which works upon an article or material in its intended use.

The rejected claims in the current Application are method claims, while the cited line of cases is directed to machinery which works upon an article or material. Hence, the Examiner's application of these cases to the Applicant's method claims is misplaced. The Examiner appears to have acknowledged this misplaced application of *In re Casey* and *In re Otto* by providing an alternative response in paragraph 7 of the Office Action.

In paragraph 7, the Examiner states that even if the intended use recitation of "to lower a binding force in the exposed portion [of the metal]" did define a patentable limitation, Chen does teach this limitation. In response, Applicant submits that in the Examiner's own words, the binding force "K" of the metal of Chen is kept constant (binding force is not lowered). The structural integrity of the metal (K, for example) is maintained. The Examiner, in preparing the ratios, is adding a claim limitation that does not exist in this application.

While the Examiner chooses to make a relative comparison in the form of the ratio exercise (provide a reference point), the added reference point is a feature that is not claimed. The stronger implication provided by the specification and claims is that the metal's own binding force is lowered (internal binding force). This should be apparent to those of ordinary skill in the art without the necessity of explicit claim language. However, in light of the

Examiner's position, the Applicant has amended independent claim 1 to recite a combination of elements in a method of manufacturing a liquid crystal display device, including using the photoresist pattern as a mask, to lower an internal binding force in the exposed portion of said metal layer. Independent claims 22, 30 and 31 have been similarly amended.

Further, the Applicant has amended independent claim 1 to recite a combination of elements in a liquid crystal display device including forming a photoresist pattern on a surface of the metal layer, such that a portion of the metal layer is exposed. Independent claims 22, 30 and 31 have been similarly amended.

The Applicant hereby incorporates the arguments provided in the Request for Reconsideration filed on May 27, 2003 by reference. In view of the current amendments to the claims, it is clear that the photoresist pattern 12b is not formed on a surface of metal layer 10a of Chen. It is also clear that an internal binding force of the exposed portion of a metal layer of Chen is not lowered. However, since photoresist pattern 12b is not formed in a metal 10a of Chen, the issue of lowering a binding force in the metal layer is not reached. This is because the metal layer of Chen (subject to the Examiner's ratios) is not analogous to the Applicant's claimed metal layer. The rejection is not proper.

Particularly, Chen cannot supply the admitted deficiency of Hirano because Chen fails to disclose or suggest a combination of elements in a method of manufacturing a liquid crystal display device, including forming a photoresist pattern on a surface of the metal layer, such that a portion of the

metal layer is exposed and using the photoresist pattern as a mask, to lower an internal binding force in the exposed portion of said metal layer, as recited in independent claim 1 (as amended) and similarly stated in independent claims 22, 30 and 31 (as amended). Neither can Ye fill this vacancy.

Claims 2, 5-9, 11, 13, 15, 16, 20, 21, 24, 28 and 29 depend, either directly or indirectly, on claims 1, 22 and 30. Since neither Hirano, nor Chen, discloses or suggest the features of independent claims 1, 22, 30 and 31, Hirano, in view of Chen, cannot render claims 1, 2, 5-9, 11, 13, 15, 16, 20-22, 24 and 28-31 obvious to one of ordinary skill in the art.

Claims 10, 17-19, and 25-27, also depend on claims 1, 22, and 30. Since neither Hirano, nor Chen, nor Ye discloses or suggests the features of independent claims 1, 22, and 30, Hirano and Chen, in view of Ye, cannot render claims 10, 17-19 and 25-27 obvious to one of ordinary skill in the art.

Reconsideration and withdrawal of these art grounds of rejection is respectfully requested.

Conclusion

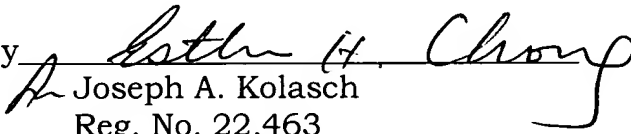
Applicant considers all of the Examiner's comments to have been addressed and all of the Examiner's rejections overcome, thereby placing all claims pending in the present Application in condition for allowance. Accordingly, a Notice of Allowability is solicited in earnest.

In the event that any outstanding matters remain in this application, Applicant requests that the Examiner contact Percy L. Square (Reg. No. 51,084) at (703) 205-8034 to discuss such matters.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

BIRCH, STEWART, KOLASCH & BIRCH, LLP

By 
Joseph A. Kolasch
Reg. No. 22,463
P.O. Box 747
Falls Church, VA 22040-0747
(703) 205-8000


JAK/PLS:asc:mlr